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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/876,645	06/07/2001	Mingqiu Sun	884.439US1	9088

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EXAMINER

TANG, KENNETH

ART UNIT	PAPER NUMBER
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2195

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/876,645	Applicant(s) SUN ET AL.	
	Examiner KENNETH TANG	Art Unit 2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to the Amendment on 1/16/08. Applicant's arguments have been fully considered but are moot in view of the new grounds of rejections.
2. Claims 1-36 are presented for examination.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-3, 9-11, 17-18, 22-23, 27-28, and 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Campbell et al. (hereinafter Campbell) (US 2001/0024497 A1) in view of Dievendorff et al. (hereinafter Dievendorff) (US 5,465,328).**

4. As to claim 1, Campbell teaches a method to be performed by a data processing system to improve fault tolerance ([0044], Abstract) comprising:

providing distributed queuing of workflows (workflow manager), whose execution is requested by one or more execution-requesting clients, among a plurality of workflow engines (page 5, [0084], page 6, [0085]);

5. In the citations shown above, Campbell teaches a first workflow engine for an execution-requesting client. However, Campbell is silent on sending a notification only if a workflow is successfully completed.

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6. Dievendorff discloses a fault-tolerant transaction-oriented data workflow processing system that notifies/updates only when the transaction is successfully completed (col. 2, lines 11-16, col. 1, lines 47-63). If the workflow transaction fails to complete successfully, then the transaction is said to BACKOUT (or synonymously to ROLLBACK) (col. 2, lines 18-22).

7. One of ordinary skill in the art would have known to modify the transaction system of Campbell such that it would send updates/notifications only when the transaction is successfully completed. The suggestion/motivation for doing so would have been that notification/updates would be made without prior checking of whether the transaction can successfully complete and these notifications are visible to other applications, thus would improve notification efficiency as well as system control (col. 2, lines 11-28). Therefore, it would have been obvious to one of ordinary skill in the art to combine Campbell and Dievendorff to obtain the invention of claim 1.

8. As to claim 2, Campbell teaches wherein providing is performed by a load manager (workflow manager) (*page 5, [0084], page 6, [0085]*).

9. As to claim 3, Campbell teaches wherein the load manager comprises a commercially available middleware product (*page 15, [0208]*).

10. As to claims 9-11, they are rejected for the same reasons as stated in the rejection of claims 1-3, respectively.

11. As to claim 17, it is rejected for the same reasons as stated in the rejection of claim 1. In addition, Campbell teaches the computer operating in a fault-tolerant manner and requesting a workflow execution on behalf of a client (*page 2, [0043] and [0044], page 4, [0061] and [0063]*).

12. As to claims 18, it is rejected for the same reasons as stated in the rejection of claim 2.

13. As to claim 22, it is rejected for the same reasons as stated in the rejection of claim 17.

14. As to claim 23, it is rejected for the same reasons as stated in the rejection of claim 2.

15. As to claim 27, it is rejected for the same reasons as stated in the rejection of claim 17.

16. As to claim 28, it is rejected for the same reasons as stated in the rejection of claim 2.

17. As to claims 32-33, they are rejected for the same reasons as stated in the rejections of claims 22-23.

18. Claims 4-8, 12-16, 19-21, 24-26, 29-31, and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Campbell et al. (hereinafter Campbell) (US 2001/0024497 A1) in view of Dievendorff et al. (hereinafter Dievendorff) (US 5,465,328), and further in view

of Maffeis (“Middleware Support for Application-to-Application Wireless Messaging”, July 2000).

19. As to claim 4, Campbell teaches wherein the notification can be performed by email [0093]. Campbell and Dievendorff are silent in that that the message is performed by a certified message capability. However, Maffeis teaches sending messages by a certified/guaranteed message delivery (page 16, bullet points 2 and 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Campbell and Dievendorff’s messages/updates/notifications to have the capability of being certified or guaranteed. The suggestion/motivation is shown in Maffeis as the reference states that this limitation is appealing for transactions because the message is delivered to its destination in spite of network outages and failures of devices or message servers (page 16, bullet 2). This is an improvement in reliability.

20. As to claim 5, Campbell teaches that all communication types are workflow enabled and pass through the load manager (workflow manager) (*page 5, [0084]*).

21. As to claim 6, Campbell teaches wherein the load manager comprises a commercially available middleware product (*page 15, [0208]*).

22. As to claim 7, Campbell teaches wherein the certified messaging capability is performed by a certified message receiver forming part of the workflow (*page 1, [0004], page 5, [0084]*).

23. As to claim 8, Dievendorff, teaches that the workflow transaction has "atomicity" wherein if a transaction fails, it rolls back or backs out. If a subsequent workflow is completed successfully, it will receive an update/notification. As also shown above, Maffeis teaches sending notifications with the certified message capability to the execution-requesting client (page 16, bullet points 2 and 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Campbell and Dievendorff's messages/updates/notifications to have the capability of being certified or guaranteed. The suggestion/motivation is shown in Maffeis as the reference states that this limitation is appealing for transactions because the message is delivered to its destination in spite of network outages and failures of devices or message servers (page 16, bullet 2). This is an improvement in reliability.

24. As to claims 12-16, they are rejected for the same reasons as stated in the rejections of claims 4-8, respectively.

25. As to claims 19-21, they are rejected for the same reasons as stated in the rejection of claims 4, 7, and 8, respectively.

26. As to claims 24-26, they are rejected for the same reasons as stated in the rejection of claims 4, 7, and 8, respectively.

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27. As to claims 29-31, they are rejected for the same reasons as stated in the rejection of claims 4, 7, and 8, respectively.

28. As to claims 34-36, they are rejected for the same reasons as stated in the rejection of claims 4, 7 and 8, respectively.

Response to Arguments

29. Applicant's arguments have been fully considered but are moot in view of the new grounds of rejections.

30. *Applicant stressed the limitation of notification only if successfully completed and that the prior art references didn't disclose or suggest this limitation.*

31. Newly added reference Dievendorff discloses notifying/updating in a fault-tolerant transaction processing system only when the transaction does complete successfully (col. 2, lines 11-16). If the transaction fails to complete successfully, the transaction is said to BACKOUT or ROLLBACK (col. 2, lines 18-22).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- **Mahoney et al. (US 6,859,462)** discloses a transaction system wherein it is detected and an ACK (acknowledgement) is received which represents the transaction being successfully completed. If the transaction failed to complete the transfer, an ACK would not be given, but the uncompleted transaction is rolled back instead (see Abstract, col. 2, lines 7-57).

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KENNETH TANG whose telephone number is (571)272-3772. The examiner can normally be reached on 8:30AM - 6:00PM, Every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Meng-Ai An/
Supervisory Patent Examiner, Art Unit 2195

3/7/08
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